

S/N TBD  
Docket: CS01-150  
Group art unit : \_\_\_ TBD

Date July 18, 2003

To: **Commissioner of Patents and Trademarks**  
P.O. Box 1450 Alexandria, VA 22313-1450

Fr: **William J. Stoffel** Reg. No. 39,390 Cust No. 30402  
PMB 455  
1735 Market St - Suite A  
Philadelphia, PA 19103

Subject:

Serial No. TDB  
Docket CS1-150  
File Date: with application  
Inventor: Sheldon C. P. Lim

**Title: A Method for Detecting and Monitoring Defects**  
Group art unit: TBD

#### INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO A820 (also PTO-1449), Information Disclosure Citation and references.

#### CERTIFICATE OF MAILING OR EXPRESS MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail or express mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450, on July 18, 2003.

Signature/Date William J. Stoffel 7/18/03

William J. Stoffel Reg. No. 39,390  
Customer number 30402

S/N TBD

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The following Patents and/or Publication are submitted to comply with the duty to disclose under CFR 1.97-1.99 and 37 CFR 1.56. Copies of each document is included herewith.

US 6,403,389B1(Chang et al.) shows a method for measuring sheet resistance.

US 5,627,101(Lin et al.) shows a test method for a electro migration using a Metal and Poly test structure.

US 5,987,398(Halverson et al.) shows a method for SPC for a process having a non-constant mean of a response variable.

US 5,883,437(Maruyama et al.) discloses a method for applying a time varying voltage between the electrode and wiring pattern at different locations so as to detect a current flow and determine a defect by a variation in the detected current flow at the different locations and a portion of the defect.

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US 6,466,038 (Pekin, et al.) shows a method for non-isothermal electro migration testing of interconnects.

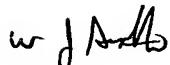
US 5,514,974 (Bouldin) shows a method for testing for metal failures by using 2 different test structures.

US 6,087,189 (Huang) shows test structure to monitor silicide.

US 5,552,718 (Bruce et al.) shows a test structure for space and line measurement.

Plusquellec et al., "Identification of defective CMOS devices using Correlation and Regression Analysis of Frequency Domain Transient Signal data", retrieved from website <http://www.csee.umbc.edu/~plusquel/pubs/itc97.pdf> on about May 20, 2003. No publication date listed.

Sincerely,



William J. Stoffel

Reg. No. 39,390

Customer number 30,402

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INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet

1

of 2

## Complete if Known

Application Number	tbd
Filing Date	
First Named Inventor	Lim
Art Unit	
Examiner Name	

Attorney Docket Number CS01-150

## U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
		US 6,403,389B1	06/11/2002	Chang et al	
		US 5,627,101	5/6/1997	Lin et al.	
		US 5,987,398	11/16/1999	Halverson et al.	
		US 5,883,437	3/16/1999	Maruyama et al.	
		US 6,466,038	10/15/2002	Pekin	
		US 5,514,974	5/7/1996	Bouldin	
		US 6,087,189	7/11/2000	Huang	
		US 5,552,718	9/3/1996	Bruce	
US-					

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				

Examiner Signature  Date Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

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Sheet

2

of

2

Application Number

TBD

Filing Date

First Named Inventor

Lim

Art Unit

Examiner Name

Attorney Docket Number

cs01-50

## NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		PLUSQUELLIC et al., "Identification of defective CMOS devices using Correlation and Regression Analysis... Date" website www.CSEE.UMBC.edu	

Examiner Signature	Date Considered
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<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

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